



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

DEC 22 2000

DOT-E 12155
(FOURTH REVISION)

EXPIRATION DATE: NOVEMBER 30, 2002

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: S&C Electric Company
Chicago, Illinois
2. PURPOSE AND LIMITATION:
 - a. This exemption authorizes the transportation in commerce of a non-DOT specification pressure vessel containing sulfur hexafluoride which is a component of an electric utility circuit interrupter unit. This exemption provides no relief from any Hazardous Materials Regulation (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with use as a component of a device not associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: The marking requirements of § 172.301(c) and § 173.304 in that a non-DOT specification packaging is not authorized except as specified herein.

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5. BASIS: This exemption is based on the application of S&C Electric Company dated December 6, 2000 submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Sulfur hexafluoride	2.2	UN1080	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packagings prescribed are:

(1) A non-DOT specification pressure vessel made of porcelain as described in the application of S&C Electric Company and conforming to S&C drawing PA-7223/7224, commonly referred to as "2000 Series and Mark Series" on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA). The maximum service pressure may not exceed 78 psig or 39 psig, respectively. Each porcelain vessel must have a design burst pressure of 7 times its respective filling pressure at 70°F (i.e., 575 or 276 psig). Each pressure vessel must be fitted with a pressure relief device conforming to the requirements and operational characteristics described in the exemption application and be set to relieve at 115-135 psig or 60-70 psig, respectively. Each porcelain vessel must be packaged in a strong outside packaging for shipment in accordance with S&C Electric drawing S-91205-½, and the photographs submitted with the application as follows:

(i) Steel casing (18 gauge) if part of a pre-assembled electrical interrupter;

(ii) Steel casing (18 gauge) with Styrofoam end cushions, packaged within a ¾" plywood metal strapped crate for stand alone replacement units;
or

(iii) Steel casing (18 gauge) and a steel overpack for cargo aircraft only shipments of stand alone units.

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(2) A non-DOT specification pressure vessel made of spirally-wound fiberglass as described in the application for exemption. Pressure vessel must conform with S&C drawings SXA-3124, 3128, and 3129, on file with the OHMEA. The maximum service pressure may not exceed 85 psig. The pressure relief shear discs must be set at a minimum relief pressure of 290 psig for the 69 kv unit, and 509 psi for the 139 kv unit. The 69 kv unit may not contain more than 3 pounds, and the 139 kv unit no more than 4 pounds of sulfur hexafluoride. Each pressure vessel must be capable of withstanding an internal pressure of five times the maximum relief pressure without bursting.

b. TESTING -

(1) Each porcelain pressure vessel must successfully pass a hydrostatic test of 5 times the filling pressure at 70°F, without measurement of expansion.

(2) Each fiberglass pressure vessel must successfully pass a pneumatic pressure test to 300 psi.

(3) Each pressure vessel must be leak tested before shipment. Leakage rate may not exceed 0.015 oz. per year.

(4) Periodic re-testing is not required.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the Hazardous Material Regulations (HMR).

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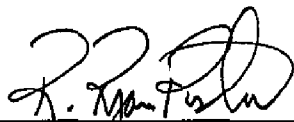
- b. Marking of each pressure vessel with the exemption number is not required; however, the outside packaging must meet the marking and labeling requirements of 49 CFR Part 172, Subparts D and E.
- c. A current copy of this exemption must be maintained at the principal place of business of each reshipper or at each facility where the package is offered or reoffered for transportation.
- d. This exemption serves as a Competent Authority Approval (CA-9902008) issued by the Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, of the United States Department of Transportation, in accordance with Paragraph 10.3 of the General Introduction to the International Maritime Dangerous Goods (IMDG) Code and Part 3; Chapter 2, paragraph 2.5 of the International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo aircraft only.
10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel and aircraft used to transport packages covered by this exemption. The shipper must furnish a current copy of this exemption to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption, and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Copies of exemptions may be obtained from the AAHMS, U.S. Department of Transportation, 400 7th Street, Washington, DC 20590-0001, Attention: Records Center, 202-366-5046.

PO: cwf/sln